REMARKS

Claims 1-3, 6-12, 14-16, 20-25 and 27-28 are pending in the present case. Independent Claims 1, 9, 20 and 23 are amended herein, as are dependent Claims 6-7, 14-15 and 20-28. Claims 4-5, 13 and 26 are cancelled herein. Claims 17-19 have been withdrawn. Applicant respectfully requests reconsideration in view of the above amendments to the present application, and the arguments set forth below. No new matter is added herein.

RESTRICTION & ELECTION

Applicant respectfully acknowledges the provisional election of Claims 1-16 and 20-28 and withdrawal of Claims 17-19 in response to the Examiner's Restriction and Election Requirement under 35 USC 121.

ALLOWABLE SUBJECT MATTER

Applicants respectfully thank the Examiner for indicating that Claims 5, 13 and 26 (now cancelled) include Allowable Subject Matter. Applicants further respectfully thank the Examiner for indicating that Claims 6-7, 14-15, and 27-28 are allowable.

Independent Claims 1, 9 and 20 and 23 are amended herein to include the Allowable Subject Matter of Claims 5, 13 and 26. The Allowable Claims 6-7, 14-15 and 27-28 are amended herein to respectively depend upon independent Claims 1, 9 and 23.

CLAIMS

Claims 1-3, 6-12, 14-16, 20-25 and 27-28 are rejected under 35 USC § 102(b) over US Patent No. 6,189,074 to Pedneau (hereinafter Pedneau). Applicants have reviewed the reference cited and respectfully assert that

it does not teach, suggest or motivate the embodiments of the present invention recited in Claims 1-3, 6-12, 14-16, 20-25 and 27-28 for the following rationale.

Claim 4 is cancelled herein. Thus, Applicant respectfully asserts that its rejection under 35 USC § 102(b) is moot.

Independent Claims 1, 9 and 20 and 23 are amended herein to include the Allowable Subject Matter of Claims 5, 13 and 26. For instance, Claim 9 is amended herein to read as shown below, with underlining added for emphasis.

> 9. A computer implemented method for entering a candidate entry to a translation lookaside buffer, comprising:
> obtaining a first cacheability bit from said candidate entry;
> obtaining a second cacheability bit from a table that associates a physical page identifier with a current attributed cacheability characteristic;
> comparing said first cacheability bit and said second cacheability bit;
> upon detecting a mismatch, generating an exception and performing a fix-up operation wherein said fix-up operation conforms said second cacheability bit with said first cacheability bit and comprises:
> determining that a mode of execution is aggressive;
> rolling back to the last commit point in said execution;
> changing said mode of execution to disallow speculation; and
> repeating said execution without speculation until said exception is triggered again; and
> entering said candidate to said translation lookaside buffer.

Independent Claims 1, 20 and 23 are amended herein after a manner similar to the amendment to Claim 9 above, to recite similar elements, which the Examiner has indicated to comprise Allowable Subject Matter.

As amended herein, Claim 9 recites a computer implemented method for entering a candidate entry into a translation lookaside buffer (TLB) wherein, upon a detected mismatch, an exception is generated and a fix-up operation performed to

conform a second cacheability bit with a first cacheability bit. The fix-up operation comprises:

determining that a mode of execution is aggressive;

rolling back to the last commit point in the execution;

changing the mode of execution to disallow speculation; and

repeating the execution without speculation until the exception is triggered again.

Thus, independent Claims 1, 9 and 20 and 23 are amended herein to include subject matter that was indicated by the Examiner to be Allowable. Claims 6-7, 14-15 and 27-28, which were also indicated by the Examiner to be Allowable, are amended herein to respectively depend upon independent Claims 1, 9 and 23.

Applicant respectfully agrees with the Examiner that this is not taught, suggested or motivated by the reference cited and is thus Allowable. Such a fix-up operation is useful because it helps enforce consistent per-physical page cacheability attributes and thus streamlines and makes more efficient memory related processing functions.

Applicant finds no teaching, suggestion or motivation in the cited Pedneau reference directed towards entering a candidate entry into a translation lookaside buffer (TLB) wherein, upon a detected mismatch, an exception is generated and a fix-up operation performed to conform a second cacheability bit with a first cacheability bit, wherein the fix-up operation comprises determining that a mode of execution is aggressive, rolling back to the last commit point in the execution, changing the mode of execution to disallow speculation and repeating the execution without speculation until the exception is triggered again, as recited in Claims 1, 9, 20

and 23 herein. Thus, Applicant respectfully asserts that Claims 1-3, 6-12, 14-16, 20-25 and 27-28 are allowable over the cited Pedneau reference under 35 USC § 102(b).

CONCLUSION

By the rationale stated above, Applicant respectfully asserts that Claims 1-3, 6-12, 14-16, 20-25 and 27-28 are allowable over the cited reference under 35 USC § 102(b). Accordingly, Applicants respectfully request that the rejections of Claims 1-3, 6-12, 14-16, 20-25 and 27-28 under 35 U.S.C. § 102(b) be withdrawn and that Claims 1-3, 6-12, 14-16, 20-25 and 27-28 be allowed.

Please charge our deposit account No. 23-0085, for any unpaid fees.

Respectfully submitted,

WAGNER, MURABITO & HAO, LLP

Dated: Nov. 23, 2005

Lawrence R. Goerke
Reg. No. 45,927

WAGNER, MURABITO & HAO, LLP
Two North Market Street, Third Floor
San Jose, CA 95113

Tel.: (408) 938-9060
Fax: (408) 938-9069